



U.S. Department of Labor

Occupational Safety and Health Administration

# *OSHA Ergonomics Program Standard*





# ***Musculoskeletal Disorders (MSDs)***

- #1 injury in American workplaces
- More than 1/3 of lost-workday injuries
- Painful to workers; costly to employers



**Ergonomics**

# ***Ergonomics***

- Fitting the job to the worker
- Solution to MSDs
- Higher productivity, increased job satisfaction



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# ***MSDs***

- 1.8 million reported each year
- 1.8 million unreported each year
- 600,000 lost-workday injuries

*Source: Bureau of Labor Statistics*



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# ***OSHA Ergonomics Program Standard Each Year Will***

- Prevent 460,000 injuries
- Save \$9.1 billion
- Cost \$4.5 billion



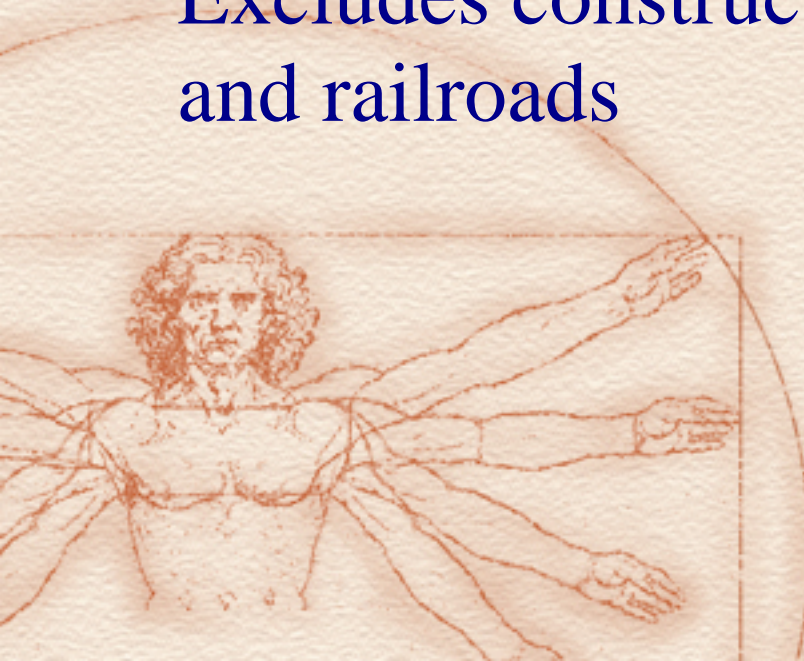
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# *Covers General Industry*

- 6.1 million workplaces
- 102 million workers  
(60 million at sites that haven't addressed ergonomics)

Excludes construction, maritime, agriculture and railroads



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# *All Employers Must*

- Provide basic information to employees on MSDs
- By October 15, 2001



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# Basic Information

- Optional 2-page fact sheet
- Optional ergonomics standard summary

18856 Federal Register

Repetitive motions, movements

Repetitive heavy lifting type of work

Awkward postures, twisting, bending, etc.

Constant pressure, vibration

What is OSHA's sign and symptoms checklist for MSDs?

What are MSDs?

MSDs are injuries and illnesses that affect muscles, nerves, tendons, ligaments, joints or spinal discs. Your doctor might tell you that you have one of the following common MSDs:

Carpal tunnel syndrome	Rotator cuff syndrome	De Quervain's disease
Trigger finger	Sciatica	Epiduritis
Tendinitis	Repetitive strain injury	Carpal tunnel syndrome
Herniated spinal disc	Low back pain	Hand-arm vibration syndrome

If you have signs or symptoms of MSDs...

MSD signs and symptoms are not reported early; permanent disability may result. It is important that you report MSD signs and symptoms right away to avoid long-lasting problems. Your employer is required to respond promptly to these reports. Contact the following person to report MSDs, MSD signs or symptoms or MSD hazards:

Name \_\_\_\_\_ Phone \_\_\_\_\_

What causes MSDs?

Workplace MSDs are caused by exposure to the following risk factors:

www.osha.gov

Federal Register / Vol. 65, No. 220 / Tuesday, November 14, 2000 / Rules and Regulations 58857

Non-Mandatory Appendix B to 1910.1343, Summary of the OSHA Ergonomics Program Standard

A. Why did OSHA issue this Ergonomics Program Standard?

B. What are the goals of the program?

C. How does the program work?

D. How does the program work?

E. How does the program work?

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W. How does the program work?

X. How does the program work?

Y. How does the program work?

Z. How does the program work?

# Ergonomics



# ***Injury Reports***

- Is it an MSD incident?
  - Work-related?
  - Days off work?
  - Restricted work/treatment beyond first aid?
  - Persistent signs/symptoms?
- Employer may consult health care professional



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# Does the Job Meet the Action Trigger?

- Basic Screening Tool - Five Risk Factors  
At least once per week:

- Repetition
- Force
- Awkward Postures
- Contact Stress
- Vibration

68848 Federal Register/Vol. 65, No. 226/Tuesday, November 14, 2000/Rules and Regulations

Table W-1 - Basic Screening Tool


You need only review risk factors for those areas of the body affected by the MSD incident.

Risk Factors This Standard Covers	Performing job or tasks that involve:	Body Part Associated With MSD Incident			
		Neck/Shoulder	Hand/Wrist/Arm	Back/Trunk/Hip	Leg/Knee/Ankle
<b>Repetition</b>	(1) Repeating the same motions every few seconds or repeating a cycle of motions involving the affected body part more than twice per minute for more than 2 consecutive hours in a workday.	✓	✓	✓	✓
	(2) Using an input device, such as a keyboard and/or mouse, in a steady manner for more than 4 hours total in a workday.	✓	✓		
<b>Force</b>	(3) Lifting more than 15 pounds at any one time, more than 55 pounds more than 12 times per day, or more than 25 pounds below the knees, above the shoulders, or at arm's length more than 25 times per day.	✓	✓	✓	✓
	(4) Pushing/pulling with more than 20 pounds of initial force (e.g., equivalent to pushing a 65 pound box across a flat floor or pushing a shopping cart with five 60 pound bags of dog food) for more than 2 hours total per day.	✓	✓	✓	✓
	(5) Pushing an unsupported object weighing 2 or more pounds per hand, or use of an equivalent pinching force (e.g., holding a small binder clip open) for more than 2 hours total per day.		✓		
	(6) Gripping an unsupported object weighing 10 pounds or more per hand, or use of an equivalent gripping force (e.g., crushing the sides of an aluminum soda can with one hand), for more than 2 hours total per day.		✓		

Federal Register/Vol. 65, No. 226/Tuesday, November 14, 2000/Rules and Regulations 68849

Table W-1 - Basic Screening Tool - continued

You need only review risk factors for those areas of the body affected by the MSD incident.

Risk Factors This Standard Covers	Performing job or tasks that involve:	Body Part Associated With MSD Incident			
		Neck/Shoulder	Hand/Wrist/Arm	Back/Trunk/Hip	Leg/Knee/Ankle
<b>Awkward Postures</b>	(7) Repeatedly raising or working with the hand(s) above the head or the elbow(s) above the shoulder(s) for more than 2 hours total per day.	✓	✓	✓	
	(8) Kneeling or squatting for more than 2 hours total per day.			✓	✓
	(9) Working with the back, neck or wrists bent or twisted for more than 2 hours total per day (see figures).				
		✓	✓	✓	
<b>Contact Stress</b>	(10) Using the hand or knee as a hammer more than 10 times per hour for more than 2 hours total per day.		✓		✓
<b>Vibration</b>	(11) Using vibrating tools or equipment that typically have high vibration levels (such as chainsaws, jack hammers, percussive tools, nailers or chipping hammers) for more than 20 minutes total per day.	✓	✓	✓	
	(12) Using tools or equipment that typically have moderate vibration levels (such as jigsaws, grinders, or sanders) for more than 2 hours total per day.	✓	✓		

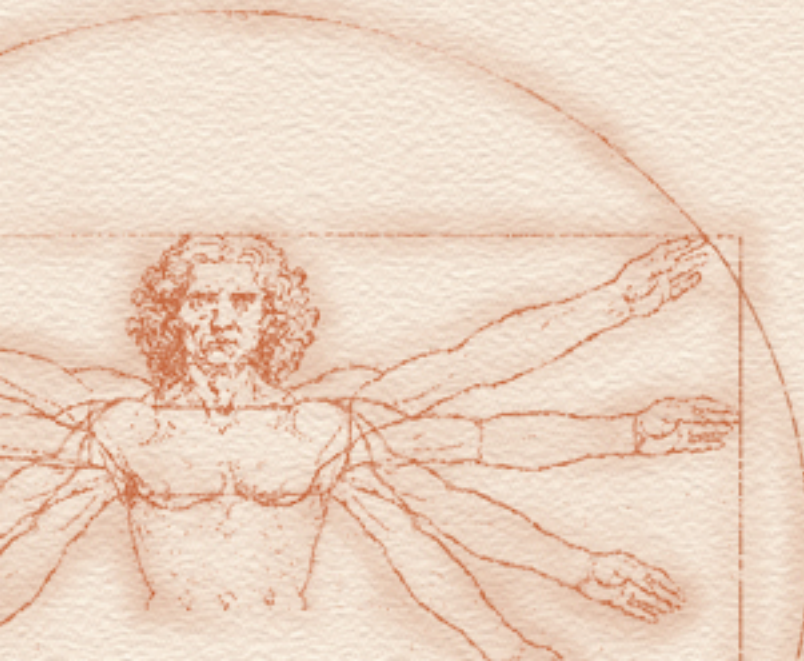
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# ***Risk Factor: Repetition***

- Same motions every few seconds
- 2 consecutive hours per day



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# ***Risk Factor: Repetition***

- Intensive keyboarding
- 4 hours total per day



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# ***Risk Factor: Force***

- Lifting (daily)
  - 75 lbs. once
  - 55 lbs. 10 times
  - 25 lbs. (awkward postures) 25 times
- Pushing/pulling (20 lbs. force)
  - 2 hours total per day



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# ***Risk Factor: Force (2 Hours Per Day)***

- Pinching  
(unsupported 2 lb. object)
- Gripping  
(unsupported 10 lb. object)

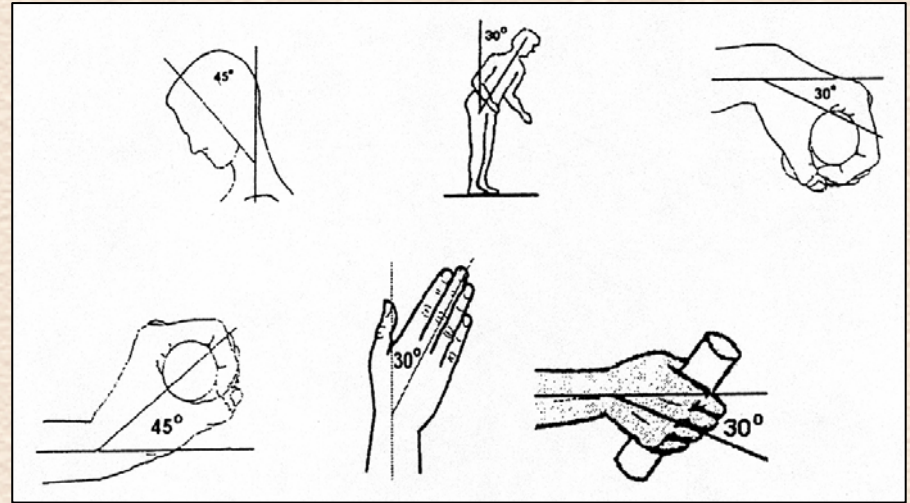


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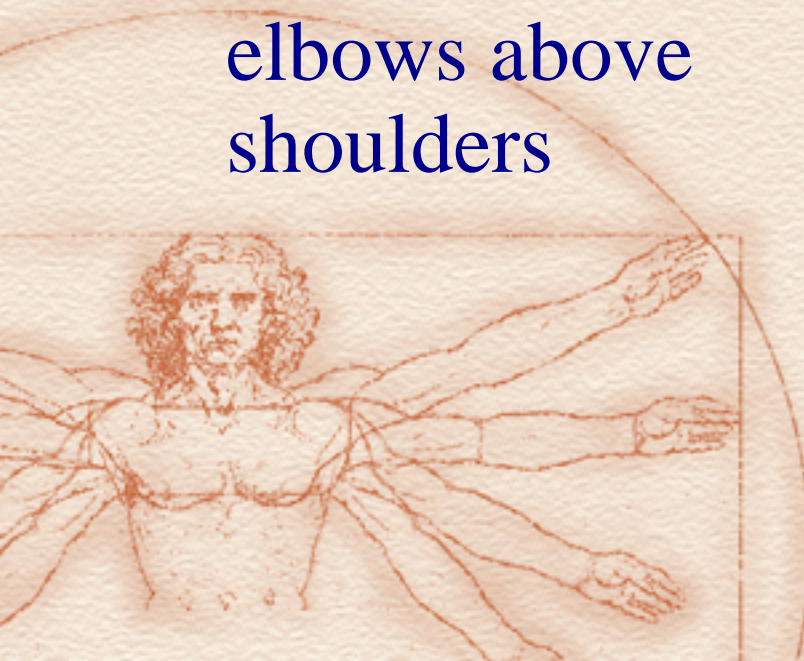


# ***Risk Factor: Awkward Postures (2 Hours Per Day)***

- Back, neck, or wrists bent/twisted
- Kneeling/squatting
- Working with hands above head or elbows above shoulders



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# ***Risk Factor: Contact Stress (2 Hours Per Day)***

- Using hand/knee as hammer more than 10 times per hour

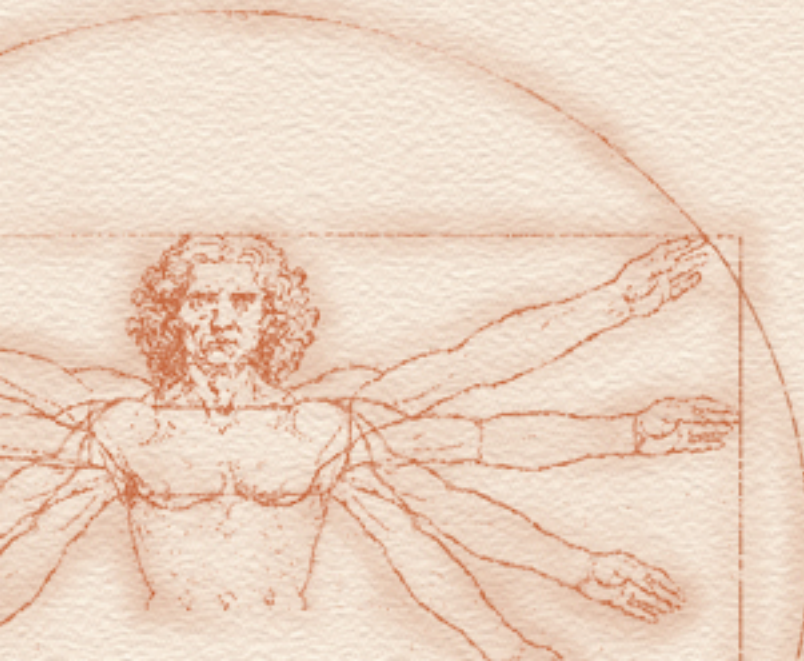
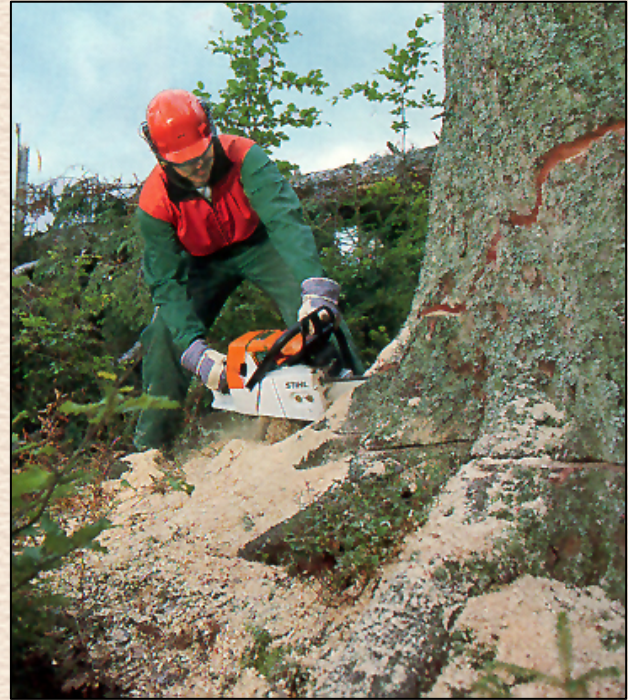


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# ***Risk Factor: Vibration***

- Using high-vibration tools (chain saws, jack hammers, percussive tools)
- 30 minutes per day

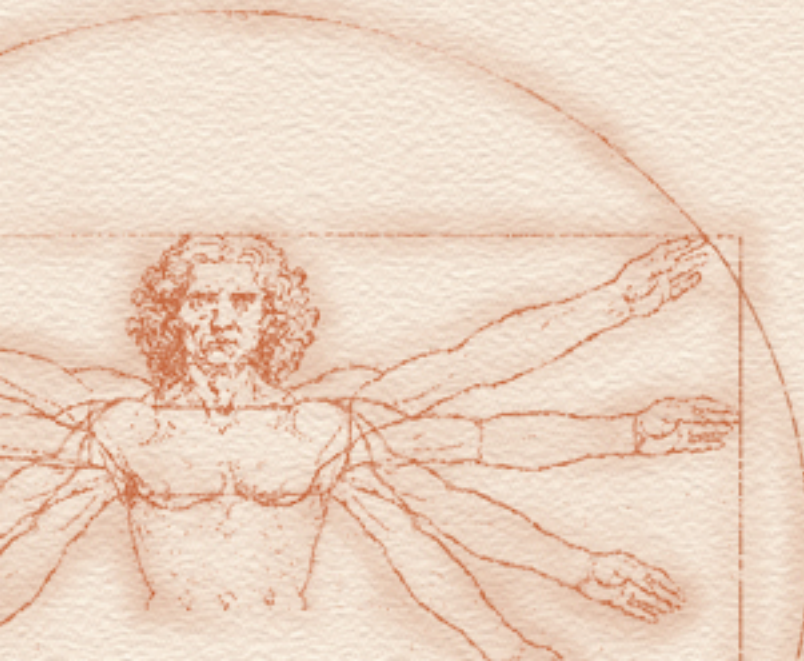


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# ***Risk Factor: Vibration***

- Using moderate vibration tools (jig saws, grinders, sanders) 2 hours per day



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# ***Risk Factor***

- If job includes a risk factor in the basic screening tool, it meets the action trigger and the employer must:
  - Do a “Quick Fix”
  - Or establish an ergonomics program for that job and further analyze the job to see if it must be fixed.

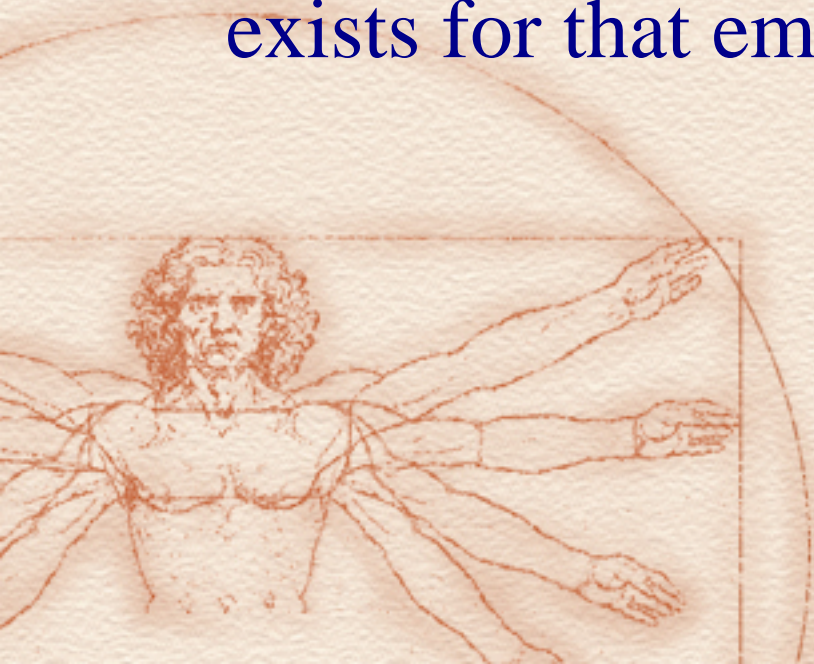


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## *Quick Fix*

- Problem can be resolved in 90 days
- Only 1 MSD, no more than 2 MSDs at site in 18 months. Applies to all workers in the same job within that facility. Can be limited to one employee if the MSD hazard only exists for that employee.

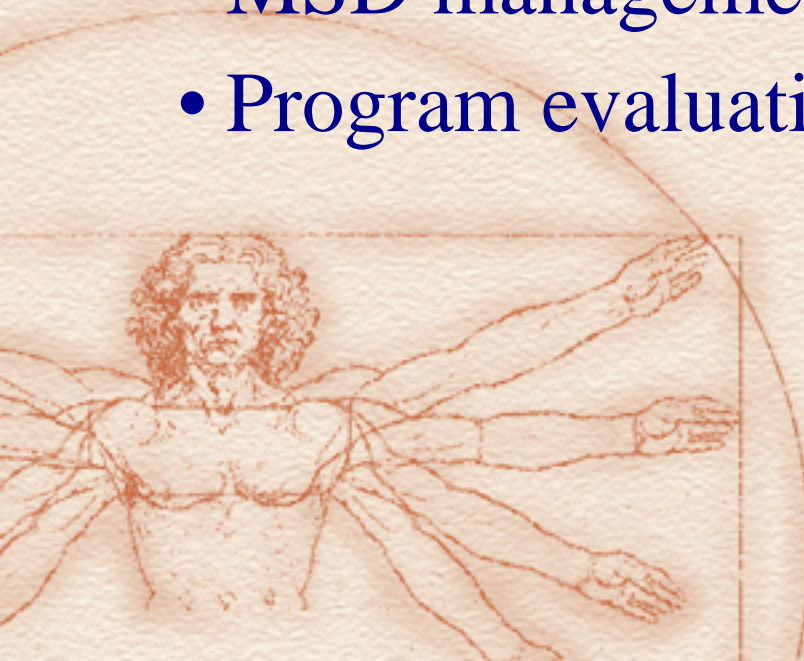


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# ***Ergonomics Program (Job-Based)***

- Management leadership and employee participation
- Job hazard analysis and control
- Training
- MSD management
- Program evaluation



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# ***Grandfather Clause for Ergonomics Programs***

- Implemented before Nov. 14, 2000
- Evaluated by Jan. 16, 2001
- Incorporate MSD management by Jan. 16, 2002



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# ***Job Hazard Analysis***

- Evaluate job that meets the action trigger
- Use one of 9 evaluation tools in Appendix D or other effective method

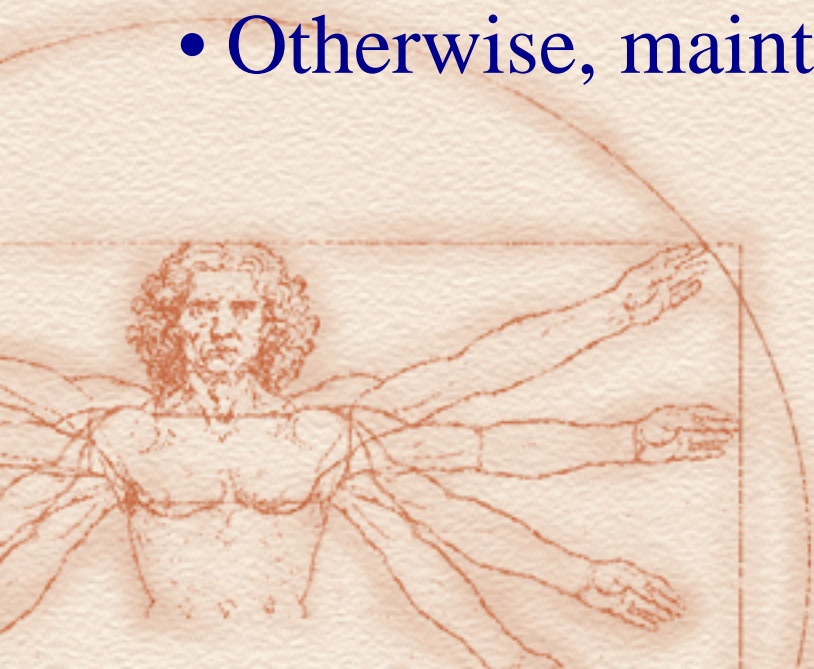


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# ***Problem Job***

- If analysis indicates a “problem job,” consult employees and fix it.
  - 90 days for initial controls
  - Up to 2 years for permanent controls;  
(4 years in the phase-in period)
- Otherwise, maintain ergonomics program.

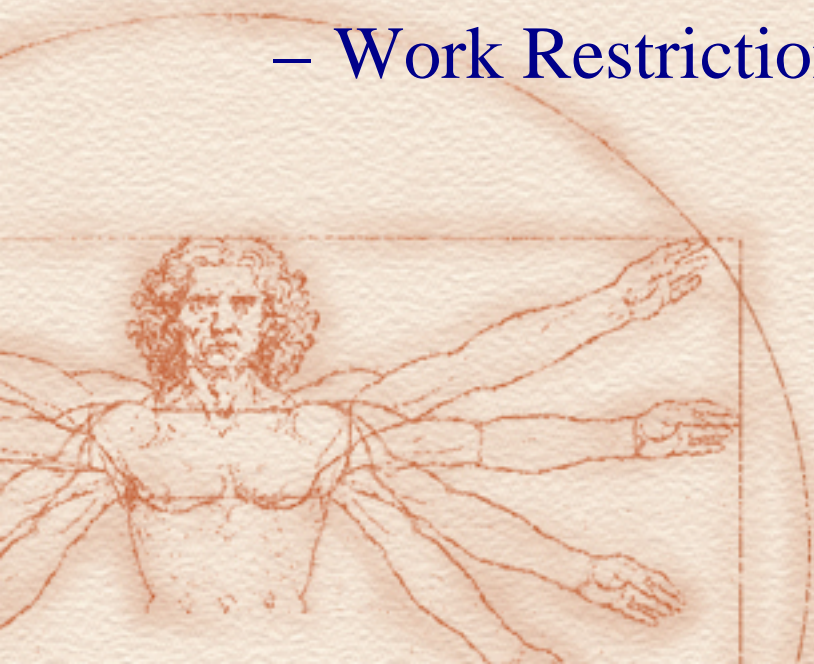


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# ***MSD Management***

- For MSD incidents where job meets the action trigger, employer must provide:
  - Access to a health care professional
  - Evaluation and follow-up
  - Work restrictions if necessary
  - Work Restriction Protection



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# ***Work Restriction Protection (WRP)***

- Encourages early reporting
- Reduces risk of disability
- Limits financial loss to worker
- Includes dispute resolution process if health care professionals disagree



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# ***WRP***

- Light duty—100 percent earnings, 100 percent benefits
- Home to recover—90 percent earnings, 100 percent benefits
- Offset by workers' compensation, option to use sick leave



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# ***WRP Continues Until***

- Employee can safely return to work
  - Health care professional determines employee can never return to that job
  - 90 calendar days have passed
- ... whichever comes first.



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# ***Good Ergonomics Is Good Economics***

- There are many solutions to work-related problems.
- Jobs that are fixed will keep future employees from developing injuries.



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Action: A Bakery redesigned its workstations and modified its tools.

Results: Absenteeism related to carpal tunnel syndrome decreased from 731 lost workdays to 8 lost workdays.



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Action: A Nursing Home set up a mandatory “no single person lift” policy, and purchased mechanical lift equipment for use in all resident transfers.

Results: Cut lost workdays by 80 percent.



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Action: An Oil Refinery added platforms, installed hoists over work tables, and conducted back injury training.

Results: Injury rates dropped by 90 percent.



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Action: A Copying Machine Control  
Assembly Company replaced standard  
workbenches with an adjustable stand.

Results: MSD rate declined by 50 percent.



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Ergonomics is a step forward for both employers and employees.

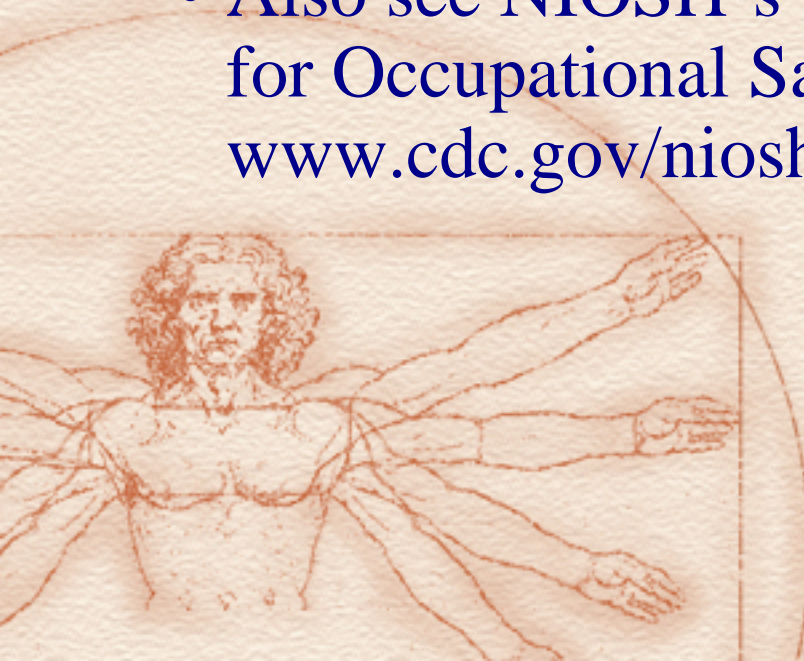


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# ***Additional Help***

- See OSHA's website at [www.osha.gov](http://www.osha.gov) for
  - Publications
  - Interactive tools
  - Links to helpful websites
- Also see NIOSH's website - - National Institute for Occupational Safety and Health - - [www.cdc.gov/niosh/homepage.html](http://www.cdc.gov/niosh/homepage.html)



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# Ergonomics:

*Real People*

*Real Problems*

*Real Solutions*

